

ment "is probably molecules of both animal and vegetable bodies, either living or derived from decomposition," and that "the fecal matters discharged by the oscula exhibit all the characteristics of having undergone a complete digestion."

If it be any satisfaction to Dr. Wallich, I assure him that my estimate of his memoir on the North-Atlantic Sea-bed remains unchanged. It is only to be regretted that the work is incomplete.

J. GWYN JEFFREYS.

22 January, 1870.

*Note on the Habits of the Discophora.*

By the Rev. THOMAS HINCKS, B.A.

In the Number of the 'Annals' for October last, Dr. Gray reports an interesting observation on the habits of certain Medusæ, which had been communicated to him by Mr. M'Andrew. This gentleman had informed him that he had often seen the sea-jellies (*Medusa æquorea*, Forskål) "lying on their backs at the bottom of the beautiful clear water of the Red Sea, with the tentacles expanded like a flower." Dr. Gray adds that he is not aware that this habit has been observed or recorded before.

My object in writing is to point out that the same thing was noticed long ago by Mertens. He states (as quoted by Agassiz) that he had constantly found Medusæ (*Polyclonia Mertensii*) in the lagoons of Ualan, "with their arms spread and turned upward, resting upon the ground." As Agassiz adds that he himself had always seen the members of this genus "in the reverse position, the arms downward," Mr. M'Andrew's testimony in support of the elder naturalist has a positive value. Probably when at rest the free zooids of the *Discophora* generally may assume the position described by Mertens, or at any rate those which are accustomed to seek their food at the bottom of the sea.

Agassiz has studied another species (*Polyclonia frondosa*) on the Florida reefs, and states that it has the curious habit "of groping in the coral mud at the bottom of the water, where thousands upon thousands may be seen crowded together, almost as closely as they can be packed upon the bottom, at a depth of from six to ten feet. When disturbed, they do not rise, but crawl about like creeping animals, now and then only flapping their umbrella."

*Note on the Occurrence of two Species of Crustacea not hitherto observed in Scotland.* By M. WARSON, M.D.

When dredging, in the month of September, last year, along with some friends, off the north coast of the island of Mull, I had the good fortune to procure two species of Crustacea which, so far as I can ascertain, have not before been obtained on any part of the Scottish coast, although they would appear to be not uncommon on some parts of that of England. These are the angular crab (*Gonoplax angulata*) and the four-horned pea-crab (*Pisa tetraodon*) of Bell.

The former was taken in Bloody Bay, at a depth of about twenty-

five fathoms, in soft mud, along with a quantity of *Virgularia* and *Pennatula*. It proved, on examination, to be a young male, seemingly half-grown, as the claws had not as yet attained the size characteristic of the adult. The nature of the ground from which the specimen was taken would seem to corroborate the statement of Cranch, as quoted by Bell, "that they live in the hardened mud, and that their habitations, at the extremities of which they live, are open at both ends." The second species above mentioned was taken off the lighthouse situated on the north coast of Mull, on stony ground, at a depth of about fifteen fathoms, and seemed, from its small size, to be also an immature specimen.

A third species was also obtained, which, though by no means so uncommon as the two preceding, seems worthy of mention. This is the spinous shrimp (*Crangon spinosus*, Bell), a specimen of which was taken at the entrance to Loch Sunart, at a depth of twelve or fourteen fathoms, and proved to be an adult of large size.

No other specimens of either of these species were obtained, although the various localities were carefully dredged on several occasions during a month's residence in that quarter: so that the different species would seem to be by no means abundant in that neighbourhood.

As previously remarked, the two first-mentioned species do not seem to have been before observed on the Scottish coast, while the latter seems only to have been taken in Shetland. I have therefore thought that it might be of interest to mention their occurrence on the west coast, more especially at a time when so much attention is being directed to the elucidation of the laws governing the distribution of different species of marine animals.

#### *Spatangus meridionalis*, Risso.

My friend Dr. Mörch of Copenhagen, who is now at Nice for his health, has just given me some information which may serve to decide the question whether the above-named species is the *Spatangus Raschi* of Lovén or merely the *S. purpureus* of Müller. Dr. Mörch says that at my request he has examined Risso's collection, that he found among the unpublished drawings of that author a figure of *S. meridionalis* very like *S. purpureus*, and that in the collection were several specimens of the latter species with a label on which was written "Mon *Spatangus meridionalis* est le Sp. *purpureus*, Lam."

J. GWYN JEFFREYS.

#### *Note on the Arrangement of the Pores or Afferent Orifices in Cliona celata*, Grant. By M. LÉON VAILLANT.

In the month of October last I had the opportunity, thanks to the kindness of M. Lemaitre, of Cancale, of witnessing the dredging of the oyster-beds for the annual inspection. This circumstance enabled me to observe in the living state that singular sponge which perforates the shells of certain Mollusca, the *Cliona*